Harting Declaration

Redacted Version of Document Sought to be Sealed

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA, OAKLAND DIVISION

CHASOM BROWN, WILLIAM BYATT,
JEREMY DAVIS, CHRISTOPHER
CASTILLO, and MONIQUE TRUJILLO,
individually and on behalf of themselves and
all others similarly situated,

      Plaintiffs,

    vs.

GOOGLE LLC,

      Defendant.

Case No. 4:20-cv-03664-YGR-SVK

DECLARATION OF RICHARD HARTING

1.   I am a Software Engineer employed by Google LLC. I have been employed at Google as an engineer since January 2013. Since around mid-2017, I manage the Google Ad Manager reporting infrastructure team at Google. My team processes Sawmill Ads logs at Google. These logs store historical event-level data about ads served through the Google Ad Manager product and users' interactions with them. As a result of my work, I have knowledge of the Sawmill Ads logs, including how they are structured, maintained, and stored. I have also been called upon to assist Google litigation counsel in processes related to preservation and searching of various additional logs. I make this declaration based on personal knowledge and information provided to me by Google colleagues, and if called to testify, I could and would competently testify to such facts.

2.   I understand Plaintiffs are requesting Google preserve all data in, and suspend the normal business retention of, various logs and keyspaces, including: ███████████ ██ .

3.   The data sources implicated by Plaintiffs' preservation demand record many billions of entries a day. These data sources are burdensome to preserve, search, and maintain. Based on my understanding of these data sources and Google's data logging system, I believe it is not feasible to store all data in these data sources indefinitely. Even if we were able to find some engineering

1 solution to storing these data sources, the task of storing and safely hosting the ever-increasing

2 amount of data would take substantial engineering effort and cost.

3   4.   Taking as an example the ███████████████ that are not currently retained

4 permanently, in the ordinary course of business, ██████████████████████████████

5 ██ would

6 require writing new scripts. Writing, testing, and validating these scripts would require about ██████

7 of engineering time. Maintaining and monitoring the pipelines would take additional time.

8   5.   Google estimates that the total size of these ████████████████ as of April 24,

9 2022, based on the current retention periods, is about ████████████; together they collect more than

10 ████████████ per day. Below is the estimated data size information for each log retrieved from

11 Google's Logs Front Door tool.

25   6.   For the past month, the logs listed below captured at least ████████████ entries with

26 the ██ field

27 set to "true" each day.

28   • ████████████████████████

- ████████████████████████

████ ████████████████

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7.   I also understand the Special Master has recommended that Google preserve all records for 10,000 randomly selected U.S. based UIDs from the selected data sources for each day for which there is data. This sampling approach will require at least ████████ engineering hours to ideate, accomplish and maintain for the ████████████ alone. Other impacted teams, including UMA, Analytics, ██████ and ██ will also have to implement and maintain preservation pipelines.

8.   In addition, I understand that Plaintiffs demand Google to preserve encryption keys ██ ████████████ .

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 25th day of April 2022 at New York.

By: _____

Richard Harting

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